

Ecological technologies in crop production (Ist Year of study, IInd Semester)

Credit value (ECTS) 8

Course category

Domain (Imposed)

Course holder:

Assoc. prof. PhD Marius Sorin ZAHARIA

Discipline objectives (course and practical works)

The aim of the course is to have students acquire knowledge on rotation, fertilizers and amendments used in organic farming, about weeds, pests and diseases in crops.

Practical work aims acquiring knowledge necessary for the establishment of ecological crops.

Contents (syllabus)

Course (chapters/subchapters)
INTRODUCTION TO ORGANIC FARMING Organic farming - definition, history, trends. Comparisons with different types of agriculture. The opportunity of organic farming.
CROP ROTATION History of rotation, importance. Rotation schemes used in organic farms.
CROP FERTILIZATION The role of soil biological activity regarding of fertility. Physico-chemical properties of the soil. Using manure and compost.
WEED CONTROL Weed management by direct and indirect methods.
PLANT PROTECTION Principles of plant protection in organic farming. Protection of plants to different crops.
FIELD CROPS TECHNOLOGIES The technology of cultivation of cereals, legumes, oily and industrial plants.

Practical works
Comparative analysis of the main types of farming. Comparing the current state of organic farming in the EU countries.
Drawing up a rotation scheme into a organic farm. Draw up a strategy for maintaining soil fertility.
Develop a plant protection scheme for cereals, legumes, oilseeds, potatoes and sugar beet.
Final colloquium of knowledge evaluation

Bibliography

1. Davidescu Dumitru, Davidescu Velicica, 1994 – *Agricultura biologică – o variantă pentru exploatațiile mici și mijlocii*. Editura Ceres, București.
2. De la Rossi R., Nota D., 2000 – *Nature and landscape production potentials of organic types of agricultures*. Agriculture ecosystem and environment, Editura Elsevier.
3. Lampkin N., 1994 – *Organic farming*. Farming Press, U.K.

4. Morar Maria Virginia, Rusu Teodor, Albert Imre, 2005 – *Ghid de combatere a buruienilor în agricultura ecologică*. Editura Risoprint, Cluj Napoca.
 5. Toncea Ion, Stoianov Radu, 2002 – *Metode ecologice de protecția plantelor*. Editura Științelor Agricole
 6. Zaharia Marius, 2010 – *Structurarea fermelor ecologice*, Editura “Ion Ionescu de la Brad”, Iași.
 7. Zaharia Marius, 2011 – *Tehnologia culturilor de câmp*, Editura „Ion Ionescu de la Brad” Iași.
- *** *Ghid legislativ pentru agricultura ecologică*, 2005, Editura Risoprint, Cluj Napoca.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written examination	60%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	40%

Contact

Assoc. Prof. PhD Marius Sorin ZAHARIA

Faculty of Agriculture - USAMV Iași

Aleea Mihail Sadoveanu nr. 3, Iași, 700490, România

telefon: 0040 232 407523, fax: 0040 232 219175

E-mail: mzaharia@uaiasi.ro